

1. (previously presented) A single press OSB panel, the panel comprising:
 - a first oriented strand face having a layer of wood flakes mixed with a thermoset resin binder, said first oriented strand face defining a plane;
 - a second oriented strand face having a layer of wood flakes mixed with a thermoset resin binder; and
 - a core material between said first oriented strand face and said second oriented strand face, said core material defining voids having boundaries that are essentially orthogonal to said plane defined by said first oriented strand face, said voids extending between said first and second oriented strand faces; andwherein said wood flakes have dimensions sufficient to bridge said voids.
2. (previously presented) The panel of claim 37, wherein said core material further comprises inorganic filler in the amount of about 10% to 80% by weight.
3. (previously presented) The panel of claim 2, wherein said inorganic filler comprises one or more of clay, calcium carbonate, and titanium dioxide.
4. (previously presented) The panel of claim 37, wherein said perforated mat is perforated such that it defines at most 75% voids by volume and wherein said core material further comprises resin binder in an amount of less than 10% by weight.
5. (previously presented) The panel of claim 37, wherein said perforated mat is perforated such that it defines at most 50% voids by volume and wherein said core material further comprises resin binder in an amount of less than 5% by weight.
6. (previously presented) The panel of claim 37, wherein said perforated mat consists essentially of paper mill sludge.
7. (currently amended) ~~A structure~~ The panel according to claim 37.

wherein said perforated mat consists essentially of recycled paper.

8. (currently amended) ~~A structure~~ The panel according to claim 37, wherein said perforated mat consists essentially of vulcanized rubber.

9. (currently amended) ~~A structure~~ The panel according to claim 37, wherein said perforated mat consists essentially of thermoset plastics.

10. (previously presented) The panel of claim 2, wherein said perforated mat comprises one or more of paper mill sludge, recycled paper, vulcanized rubber, thermoset plastics, and volcanic rock.

11. (cancelled)

12. (currently amended) ~~A structure~~ The panel according to claim 38, wherein said core further comprises inorganic filler in the amount of 10% to 80% by weight.

13. (currently amended) ~~A structure~~ The panel according to claim 12, wherein said inorganic filler comprises one or more of clay, calcium carbonate, and titanium dioxide.

14. (currently amended) ~~A structure~~ The panel according to claim 38, wherein said core comprises between 0% and 75% voids by volume and wherein said core further comprises resin binder in an amount of less than 10% by weight.

15. (currently amended) ~~A structure~~ The panel according to claim 38, wherein said core comprises between 0% and 50% voids by volume and wherein said core further comprises resin binder in an amount of less than 5% by weight.

16. (currently amended) ~~A structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of paper mill sludge.

17. (currently amended) ~~A-structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of wood chips.

18. (currently amended) ~~A-structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of recycled paper.

19. (currently amended) ~~A-structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of vulcanized rubber.

20. (currently amended) ~~A-structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of thermoset plastics.

21. (currently amended) ~~A-structure~~ The panel according to claim 38, wherein said compression-resistant material consists essentially of volcanic rock.

22. (currently amended) ~~A-structure~~ The panel according to claim 14, wherein said compression resistant material comprises one or more of paper mill sludge, wood chips, recycled paper, vulcanized rubber, thermoset plastics, and volcanic rock.

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (cancelled)

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (cancelled)

34. (cancelled)

35. (cancelled)

36. (cancelled)

37. (previously presented) The panel of claim 1, wherein said core material comprises a perforated mat comprising perforation boundaries essentially orthogonal to the plane defined by said first oriented strand face.

38. (currently amended) ~~A structure~~ The panel according to claim 1, wherein said core comprises a plurality of individual chunks of compression-resistant material that are so oriented that voids between adjacent chunks have boundaries that are in a direction essentially orthogonal to said plane defined by said first oriented strand face.

39. (cancelled)

40. (previously presented) The panel of claim 1, wherein substantially all said voids have a diameter which is smaller than a diameter of substantially all said wood flakes.